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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,982	12/10/2003	Heidi L. Barnes	10030763-1	9431

7590 06/15/2005

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EXAMINER	
JONES, STEPHEN E	

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/733,982	BARNES ET AL.	
	Examiner	Art Unit	
	Stephen E. Jones	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/10/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-6, 8-10, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Dodart.

Dodart teaches a edge connection structure including: a shielded transition which extends beyond the tip of the coaxial line (Claim 1); the insulation of the coaxial line provides support for a coaxial cable center conductor and the tip end extends away from the insulation (Claim 3); the entire connection structure is attached (i.e. integrated) (Claim 4); the device forms an airline portion where the insulation is removed and the device is impedance matched (e.g. see Fig. 2 and Col. 1, lines 16-30) (Claims 5-6); the portion of the shielding (cap 3) is removable for access (i.e. it can be considered a view port since access includes visibility) (Claims 8-9); the walls of the shielded block contact and are supported by the circuit board including fastening screws (Claim 10), and solder is introduced into the hole (24). Also, note that the limitation of a solder reflow process is not given any patentable weight since only the final product structure is patentable in an apparatus claim (Claim 16).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dodart et al. in view of Nelson.

Dodart teaches a connection structure as described above, but does not teach that insulation support of the coaxial line is glass (i.e. thus forming a glass to metal).

Nelson provides the general teaching of making a coaxial line with glass as the insulation (see Col. 6, lines 47-50).

It would have been considered obvious to one of ordinary skill in the art to have substituted glass such as taught by Nelson in place of the generic insulation in the Dodart connection structure, because it would have been a mere substitution of well-

known insulation means for a coaxial line and would have provided the advantageous benefit of being an excellent dielectric material for a coaxial cable (see Nelson).

6. Claims 1-6, 8-10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosler, Sr. in view of Dodart.

Hosler teaches a connector for the edge of a circuit board including: a shielded transition block and a coaxial line; the block has two holes with one containing the coaxial insulation (i.e. a pin support) and the other extending toward the tip of the coaxial line and forming an air line around the tip forming a flange which fits in a cutout of the board (Claim 3); the connection structure is integrated together (Claim 4); the connector is impedance matched (see Col. 4, lines 50-53) (Claims 5-6); and the sidewalls contact/support the connector structure to the board in the same manner as the present invention (see Fig. 4) (Claim 10); and the tip is capable of being soldered to the solder pad on the board since the tip is accessible (Claim 2).

However, Hosler does not teach that the shielding extends beyond the center tip of the coaxial line (Claim 1) or transitioning (Claim 16), or a lid and view port (Claims 8-9).

Dodart provides the exemplary teaching of providing a lid (i.e. a cover providing a removable view port) which extends beyond the connection transition.

It would have been considered obvious to one of ordinary skill in the art to have included a removable lid extending beyond the connection transition such as taught by Dodart to the Hosler device, because it would have provided the advantageous benefit

of preventing parasitic radiation (see Dodart abstract), thereby suggesting the obviousness of such a modification.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hosler, Sr. and Dodart as applied to claims 1 and 3 above, and further in view of Nelson.

The combination of Hosler and Dodart teaches a connection structure as described above including Teflon as an example of the insulation support of the coaxial line, but does not teach that insulation support of the coaxial line is glass (i.e. thus forming a glass to metal).

Nelson provides the general teaching of making a coaxial line with glass as the insulation (see Col. 6, lines 47-50).

It would have been considered obvious to one of ordinary skill in the art to have substituted glass such as taught by Nelson in place of the Teflon insulation in the Hosler/Dodart connection structure, because it would have been a mere substitution of well-known art-recognized equivalent/alternative insulation means for a coaxial line and would have provided the advantageous benefit of being an excellent dielectric material for a coaxial cable (see Nelson).

8. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosler, Sr. and Dodart as applied to claim 1 above, and further in view of Tamaki et al.

The combination of Hosler and Dodart teaches a connection as described above (including Claim 15). However, they do not explicitly teach that the shielding is soldered

to the board and the tip is soldered to the solder pad on the board (Claim 11), that the board includes a via connection between the tip and the board conductor (Claim 12) a plurality of ground vias coupled to the outer conductor (Claim 13), or mechanical vias in the shielding solder area (Claim 14).

Tamaki (e.g. Figs 13A-C) teaches a coaxial interconnection including providing vias and soldering in the areas of the tip and shielding. Also, Tamaki (e.g. Fig. 16A) teaches providing vias for connecting between the tip of the coaxial line and conductors in circuit boards such as striplines.

It would have been considered obvious to one of ordinary skill in the art to have provided a via transition to an internal layer of the board, grounding vias, and soldering the shielding and tip such as taught by Tamaki, especially since Hosler is silent as to the type of conductor transmission line that is on the board and stripline (i.e. a line sandwiched between two ground planes in a board) is a well-known transmission line structure for interconnection with a coaxial line such as taught by Tamaki, the grounding vias such as taught by Tamaki would have provided the advantageous benefit of selecting/regulating the impedance of the stripline since impedance is directly related to the distance to the ground and the vias make the ground plane closer to the line as seen in Fig.13B thus providing a selected impedance characteristic based on the distance. Also, since the vias are the same in structure as the presently claimed invention, as an obvious consequence they provide some mechanical support. Furthermore, providing the solder to the shielding and tip such as taught by Tamaki to the Hosler/Dodart device would have provided the advantageous benefit of a reliable

electrical and mechanical connection, thereby suggesting the obviousness of such a modification.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sherman et al. teaches using a cover for an access hole in a shielding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEJ

STEPHEN E. JONES
PRIMARY EXAMINER